

**REMARKS**

Claims 1, 2, 4-8 and 10-12 are all the claims pending in the application.

Claims 1, 2, 4-8 and 10-22 are rejected under 35 U.S.C. 112, first paragraph.

Claims 1, 2, 4-8 and 10-22 are rejected under 35 U.S.C. 112, second paragraph.

Claims 1, 2, 5, 11, 13, 15, 19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishii et al. (*Nucleic Acids Res.*, 1997, 25 (17), pgs. 3550-3551).

The Applicants traverse the rejections and request reconsideration.

***Rejections based on section 112, first paragraph***

The patent office contends that the Specification is enabled only for fixing the probes using a “non-covalent attachment” and not enabled for a “covalent attachment.” The Applicant is surprised that the Patent Office is making this rejection now after over six Office Actions, considering that the limitation “fixing the probes to the substrate” was part of the originally filed claim 1. The Applicant requests the Examiner to clarify as to why this rejection was not made earlier if indeed there was a section 112, first paragraph issue.

In any case, to be enabling, the specification of the patent must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation. *Plant Genetic Systems v Dekalb Genetics Corporation*, 315 F. 3d 1335 (Fed. Cir. 2003), citing *Genentech Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997). Further, enablement is determined as of the effective filing date of the patent. *Id. citing In re Hogan*, 559 F.2d 595, 604 (CCPA 1977).

The scope of the claims must bear a reasonable correlation to the scope of enablement provided by the Specification to persons of ordinary skill in the art. *Id.* citing *In re Fischer*, 427 F.2d 833, 839 (CCPA 1970).

The court in *Plant Genetic Systems*, referring to *In re Hogan* determined that the claims in *In re Hogan* referred to a seed. The patentee asserted that the claim covers both monocot seeds and dicot seeds. The court determined that at the time of filing of the relevant application, monocots existed and were highly desirable for the claimed purpose. Therefore, they were not unknown at the time of the application.

Like in *In re Hogan*, the techniques for fixing probes on to a substrate were well-known at the time of filing this application, i.e., at least by September 4, 2000 which is the priority date of the present application. The technique of “covalent attachment of a probe onto a substrate” was well known in the art prior to the priority date of the captioned application.

For example, U.S. Patent No. 4,512,896 states “In 1976, it was discovered that single stranded RNA and DNA could be covalently coupled to a cellulose powder substituted by aminobenzyloxymethyl groups which were activated by diazotizing the amine forming diazobenzyloxymethyl (DBM) --cellulose. This filled a gap in hybridization technology since RNA does not bind well to nitrocellulose making a Southern Transfer difficult or impossible. In 1977, Alwine, et al. “Method for Detection of Specific RNAs in Agarose Gels by Transfer to Diazobenzyloxymethyl-Paper and Hybridization with DNA Probes, *Proc. Natl. Acad. Sci. U.S.A.*, 74: 5350-5354, prepared a cellulosic fibrous sheet (i.e. blotting paper) derivatized with diazobenzyloxymethyl groups, termed DBM-paper, viz. ##STR1## which could be used for transfer of an electrophoretically separated pattern of RNA from an agarose gel in a method similar

to a Southern Transfer. Aminophenylthioether paper activated to the diazo form (DPT-paper) has also been used. Both papers covalently and irreversibly couple DNA, RNA and proteins.”

Therefore, it is clear that the specification reasonably provides enablement for the method of fixing the probe using not only “non-covalent attachment” but also “covalent attachment.”

***Rejections under Article 112, second paragraph***

Claim 1 has been amended to overcome the noted rejections.

***Claim rejections under 35 U.S.C. § 102***

Rejection of claims 1, 2, 5, 11, 13, 15, 19 and 22 are rejected under 35 U.S.C. 102(b) based on Ishii et al.

The claims have been rejected based on the newly cited reference Ishii. The Applicant respectfully submits that Ishii is used for merely selecting monoclonal antibodies against DNZ-binding proteins. MABs are immobilized onto plates coated with anti-IgG. The DNA binding activity trapped onto the plates are then measured.

However, there is no disclosure for fractionating the target. In other words, Ishii does not disclose or even remotely suggest steps c-e and the wherein clause of claim 1.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP 2131 *citing Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Ishii does not anticipate claim 1 at least for the above discussed deficiencies in the disclosure therein.

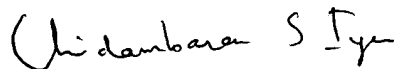
Claims 2, 5, 11, 13, 15, 19 and 22 are dependent on claim 1, and therefore, are allowable at least for the same reasons.

The patent office does not appear to have made any prior art rejections of claims 4, 6-8, 10-12, 14, 16-18, 20 and 21.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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